

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS
- BLANK PAGES

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 November 2001 (08.11.2001)

PCT

(10) International Publication Number
WO 01/82831 A3

(51) International Patent Classification⁷: **A61F 2/06**

(21) International Application Number: PCT/US01/12152

(22) International Filing Date: 12 April 2001 (12.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/560,209 28 April 2000 (28.04.2000) US

(71) Applicant: **ADVANCED CARDIOVASCULAR SYSTEMS, INC.** [US/US]; 3200 Lakeside Drive, Santa Clara, CA 95054-2807 (US).

(72) Inventors: **STACK, Richard, S.**; 106 Alder Place, Chapel Hill, NC 27514 (US). **MULLER, Paul, F.**; 125 Glasgow Lane, San Carlos, CA 94070 (US). **PATEL, Udayan, G.**; 155 Knights Haven Way, San Jose, CA 95111 (US).

(74) Agents: **HANKE, Gunther, O.** et al.; Fulwider Patton Lee & Utecht, LLP, Howard Hughes Center, Tenth floor, 6060 Center Drive, Los Angeles, CA 90045 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

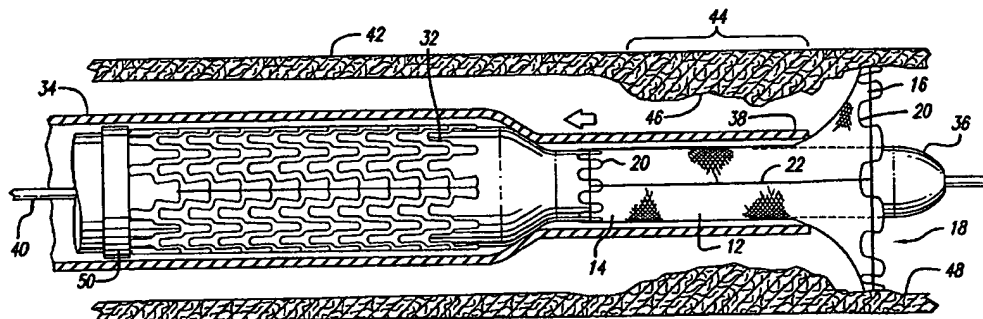
Published:

— with international search report

(88) Date of publication of the international search report:
21 March 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **SYSTEM AND DEVICE FOR MINIMIZING EMBOLIC RISK DURING AN INTERVENTIONAL PROCEDURE**



(57) Abstract: A device for trapping plaque against the vascular wall includes a tubular-shaped net which is made from a blood-permeable and biocompatible material having expandable members attached to each end of the tubular net. The expandable members are placed in their expanded position within a blood vessel to maintain the tubular net against the area of plaque to be treated with an interventional procedure. A balloon angioplasty procedure or stenting procedure is subsequently performed within the inner lumen formed in the tubular net. The tubular net prevents any emboli which may be created during the interventional procedure from entering into the bloodstream.

WO 01/82831 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/12152

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F2/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 714 816 A (BRAUN CELSA SA) 13 July 1995 (1995-07-13) figures	1-4, 6-10, 32-34
X	US 5 948 191 A (SOLOVAY KENNETH S) 7 September 1999 (1999-09-07) the whole document	1,6,7
A		13,14, 23-25,32
X	EP 0 809 980 A (PARODI JUAN C) 3 December 1997 (1997-12-03) the whole document	13,15,17
A		1,6,23, 32
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

12 November 2001

Date of mailing of the international search report

19/11/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Neumann, E

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/12152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 14808 A (ADVANCED CARDIOVASCULAR SYSTEM) 23 May 1996 (1996-05-23) page 13, line 6 -page 14, line 5; claim 16; figures ---	1, 6-10, 13, 23-25, 32
A	US 5 879 380 A (MOLL FRANCISCUS LAURENS ET AL) 9 March 1999 (1999-03-09) column 5, line 4 - line 25; figures 8, 9 -----	1, 13, 23, 32

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. l. Application No

PCT/US 01/12152

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 2714816	A	13-07-1995	FR 2714816 A1	13-07-1995
US 5948191	A	07-09-1999	US 5741326 A	21-04-1998
			CA 2209880 A1	15-01-1998
			EP 0819412 A2	21-01-1998
EP 0809980	A	03-12-1997	US 5709701 A	20-01-1998
			AU 730046 B2	22-02-2001
			AU 1894697 A	04-12-1997
			CA 2202443 A1	30-11-1997
			EP 0809980 A2	03-12-1997
			US 5797949 A	25-08-1998
WO 9614808	A	23-05-1996	CA 2204411 A1	23-05-1996
			EP 0790810 A1	27-08-1997
			JP 10508775 T	02-09-1998
			WO 9614808 A1	23-05-1996
			US 5800521 A	01-09-1998
			US 5769887 A	23-06-1998
US 5879380	A	09-03-1999	NL 9401633 A	01-05-1996
			EP 0804128 A1	05-11-1997
			WO 9610375 A1	11-04-1996